

Abstract

The present invention provides assays for identifying compounds that affect the transcriptional activity of a protein of interest or affect the stability of the protein of interest. The triple readout assay system which can be used to identify compounds that affect the transcriptional activity of a protein of interest uses three cell lines to control for non-specific effects such as sequences flanking the inserted gene and cytotoxicity. The double readout assay system assesses protein stability and uses a fusion protein of a reporter and the protein of interest. These assay systems may be particularly useful in identifying compounds that affect transcription factors and tumor suppressors. In a particular embodiment, the tumor suppressor p53 is the target protein being studied.